

September 21, 2001

MEMORANDUM TO: Edmund J. Sullivan, Chief  
Component Integrity & Chemical Engineering Section  
Materials and Chemical Engineering Branch  
Division of Engineering

FROM: Maitri Banerjee, Lead Project Manager /RA/  
Steam Generator Action Plan  
Division of Licensing Project Management

SUBJECT: SUMMARY OF AUGUST 29, 2001, PUBLIC MEETING WITH THE  
NUCLEAR ENERGY INSTITUTE REGARDING NEI 97-06

On August 29, 2001, staff of the Nuclear Regulatory Commission (NRC) met with representatives of the Nuclear Energy Institute (NEI) and industry at the NRC's office in Rockville, Maryland, for a working level meeting on steam generator issues. The purpose of the meeting was to discuss revisions to the proposed regulatory framework under the NEI 97-06 steam generator (SG) initiative, based on NRC comments dated August 2, 2001, ADAMS Accession No. (ML01220349). Attachment 1 ADAMS Accession No. (ML012550120) is a list of those attending the meeting.

Mr. Bateman, NRC, opened the meeting with remarks about NRC's recognition that the industry has made considerable improvement in the SG guidelines and the proposed regulatory framework. However, both the industry and the NRC are seeking improvements to the SG program, and should recognize that it is an evolutionary process. Issues will continue to arise that will need to be resolved. Mr. Sullivan, NRC, pointed out that the recent interactions with NEI including the comments provided on August 2, 2001, reflect management through the division director level. A final position reflecting upper level NRC management, Advisory Committee on Reactor Safeguards, Committee to Review Generic Requirements, and the Commission, will have to await the completion of the formal review process for NEI 97-06. Mr. Sullivan explained that the agenda for the meeting included: (1) an NRC overview of NEI 97-06 and discussion of its concerns on the regulatory framework, and in particular, extension of the SG inspection intervals; (2) industry presentation on Sections 3 and 4 of the draft Electric Power Research Institute (EPRI) Steam Generator Examination Guidelines, Revision 6, including a presentation on a case study on application of Section 4; and (3) discussion on the presentations and on next steps in the process of resolving NRC comments. The handouts containing the NRC and industry presentation slides are provided as Attachments 2 ADAMS Accession No. (ML012430166), 3 ADAMS Accession No. (ML012430172), 4 ADAMS Accession No. (ML012430257) and 5 ADAMS Accession No. (ML012430272).

CONTACT: Maitri Banerjee, SGAP/DLPM  
415-2277

Mr. Murphy, NRC, described the staff concerns regarding the industry proposal to allow considerable extension of the SG inspection intervals beyond those currently provided for in the plant technical specification (TS). The staff was concerned that the EPRI guidelines that support the proposed generic change package are not sufficiently well developed to support extended inspection intervals beyond those in the current TS requirements. Mr. Murphy discussed the issues with the EPRI guidelines that are critical to the effectiveness of condition monitoring needed to satisfy the SG performance criteria. Mr. Murphy stated that the staff view is that as long as the restrictions on the current inspection interval are maintained or alternative intervals are approved by the staff, the risk of the SG operation will be maintained at its current level. With this approach, the focus could be shifted to resolving issues related to satisfying the SG performance criteria. The staff indicated that to ensure that risk is not increased, it needs to maintain regulatory control on inspection intervals including extension of the plant-specific or generic inspection intervals. The staff proposed an approach to accomplish this that would move this approval out of the plant TS, similar to the approach in the NEI 97-06 generic change package for performance criteria and alternate repair criteria. Mr. Murphy's presentation slides are contained in Attachments 2 and 3.

An additional item pointed out during Mr. Murphy's presentation, was the draft version of the staff review of the industry responses to many of the NRC action plan issues stemming from RIS 2000-22 and the Indian Point 2 Lessons Learned Task Group report. This draft writeup is contained in Attachment 6 ADAMS Accession No. (ML012430148).

Mr. Marion of NEI characterized the NRC proposal on maintaining regulatory control on SG program changes as a disincentive to the industry's ongoing improvements to the program, and both NEI and staff recognized this as an issue of further discussion.

The industry described their proposed approach in allowing extension of the current inspection intervals incorporated in draft Revision 6 of the EPRI SG Examination Guidelines (Attachment 4). The approach contained in this draft is currently going through industry review and comment resolution, and will require certain committee and industry management review before finalizing Revision 6, currently planned for early 2002. The key elements of the prescriptive approach in Section 3 involve a prescriptive sampling requirement, absence of active degradation mechanisms, a requirement to perform degradation assessment at each refueling outage even if no SG tube inspection is done during that outage, and a requirement to consider experience from other similar plants in developing degradation assessment to support extended inspection intervals. The industry also presented the essential elements of an alternate performance based SG inspection methodology in Section 4 that has been developed (Attachment 5). This approach, presented for the first time to the staff, depends on identified degradation mechanisms, degradation specific performance criteria measures and condition monitoring limits (CML), and establishing inspection intervals based on time to reach the CML.

Mr. Sullivan summarized the NRC comments by saying that the industry has proposed a generally workable approach for SGs with improved tubing materials (presentation on Section 3 of the guidelines), but the staff has concerns that need to be discussed. The staff will review the information presented in more detail and proposed that a telephone conference call be scheduled to discuss its comments. Among others, comments will likely include the definition of active degradation, rigorousness in the industry's approach on following-up conditions that are

new or not totally understood, and regulatory control on inspection intervals. Mr. Sullivan also indicated that more staff work needed to be done to understand and accept the industry's performance based approach, and indicated that this should be done on a longer term basis rather than holding up NRC approval of the NEI 97-06 generic change package. Mr. Sullivan acknowledged that while NEI was not interested in regulatory controls on inspection intervals, staff acceptance of extended inspection intervals for SGs with improved tubing materials even with regulatory controls would be a significant benefit to the industry over the intervals in the current framework.

Mr. Marion of NEI indicated that the industry intended to develop one or more alternative proposals to the regulatory controls sought by the staff. The staff indicated its willingness to discuss such alternatives.

The NRC maintains an Agencywide Documents Access and Management System (ADAMS), which provides text and image files of NRC's public documents. These documents may be accessed through the NRC's Public Electronic Reading Room on the Internet at <http://www.nrc.gov/NRC/ADAMS/index.html>. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737 or by email to [pdr@nrc.gov](mailto:pdr@nrc.gov).

cc: Jim Riley, NEI

Attachments: 1. Meeting Attendees  
2. Issues/NEI Steam Generator Generic  
Change Package  
3. Comments re: paper by R. Keating  
4. Draft Revision 6 PWR SG Examination  
Guidelines  
5. Performance Based S/G Inspection  
Methodology  
6. Review of EPRI SGMP Responses  
to NRC

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## **MEETING ATTENDEES**

### **NRC MEETING WITH NEI ON NEI 97-06** **“STEAM GENERATOR PROGRAM GUIDELINES”** **August 29, 2001 (1pm - 4pm)**

#### **NRC/NRR**

Maitri Banerjee, NRR/DLPM  
Bill Bateman, NRR/DE/EMCB  
Bob Tjader, NRR/TSB  
Steve Long, NRR/DSSA/SPSB  
Ken Karwoski, NRR/DE/EMCB  
Cheryl Khan, NRC  
Edmund Sullivan, NRC  
Louise Lund, NRC  
Anne Passarelli, NRC  
Emmett Murphy

#### **MCGRAW-HILL**

Jenny Weil

#### **U.S. SCIENTECK**

Deann Raleigh

#### **SOUTHERN CO.**

Rick Mullins

#### **RG&E**

John F. Smith

#### **PSEG NUCLEAR**

Brooke Knieriem  
Patrick Fabian

#### **SOUTH TEXAS PROJECT**

John T. Conly

#### **NEI**

Jim Riley  
Alex Marion

#### **OPPD**

Joseph Mathew

#### **EPRI**

Gary Henry  
Mati Merilo  
Mohamad Behraves

#### **DUKE**

Dan Mayes

#### **CON EDISON**

Mike Galler

#### **FPL**

Gary L. Boyers

#### **EXCEL ENERGY (NSP)**

Scott A. Redner

#### **CCNPP-CEG**

Joseph M. Mate

**SO. CAL. EDISON (SONGS)**

Richard Coe

**PG&E**

Bob Exner

**W**

Bob Keating

**SNC**

Forrest Hundley

**FRAMATOME ANP**

Alan Brown

**STP EGS**

Chet McIntyre

**ENTERGY**

Robert Cullen